

*UDC 338.48:504*

*Review*

*Received: 20.04.2009*

## **SPECIFIC KNOWLEDGE FOR MANAGING ECOTOURISM DESTINATIONS\***

**Dora Smolcic Jurdana**  
University of Rijeka, Croatia<sup>1</sup>

**Abstract:** Management of ecotourism destinations is very demanding because of the specific and interdisciplinary knowledge that is necessary. Great knowledge, which consists of knowledge from human and natural sciences at the same time, emphasizes the need for permanent education, formal and informal of ecotourism destination managers. It should be generally stated that countries which have a great areas and resources for ecotourism development should create a specific program for education about the relevant and specific issues. Besides the availability of natural resources, knowledge is for sure the most important and basic element of ecotourism destination competitiveness improvement. In general these statements are applicable to all destinations which attractiveness arises from the quality and uniqueness of natural resources.

*Key words:* sustainable development, ecotourism, natural resources, knowledge.

### **INTRODUCTION**

The ecotourism as a type of tourism is facing the growth of tourism demand, but also has to face a great challenge in order to protect the natural resources and participate at the tourism market at the same time. The natural environment is being increasingly recognized as a key factor in tourism.

### **1. TOURISM IMPACT ON THE NATURAL ENVIRONMENT**

Very important aspect of sustainable development is environmental limitation i.e. the limited abilities of the natural surroundings to meet present and future needs. Tourism, as any other economic activity, has significant impact on the environment and that fact tourism managers must have in mind during tourism planning process. Therefore, modern instruments for minimizing negative impact must be accepted (carrying capacity, environmental impact assessment, limits of acceptable change, visitor flow management, code of conduct...). (Smolcic Jurdana, D., 2003).

---

\* This article is the result of the scientific project "Management of Knowledge and Personnel in Tourism as a Feature of Croatian Identity" (116-000000-0758), financed by Croatian Ministry of Science, Education and Sports.

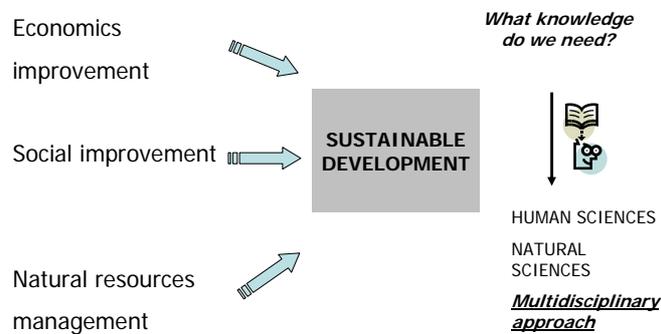
<sup>1</sup> **Dora Smolcic Jurdana**, PhD, Associate Professor, University of Rijeka, Faculty of Tourism and Hospitality Management, Opatija, Croatia.

The Brundtland report points out the following content for sustainable development: (Laws, 2000)

- People themselves have a capacity to achieve sustainable development;
- A long-term perspective is necessary; there must be sufficient resources and a good environment for coming generations as well;
- There must be a balance between rich and poor countries; everybody's basic needs must be provided for;
- We must all, in the rich world particular, change our attitudes and lifestyles to favour sustainable ecologically adapted development;
- Development is a process that can be steered towards sustainability.

Keeping the above in mind we can conclude that sustainable development is a process of changes aimed at enhancing the ability of meeting needs and aspirations, both today and tomorrow, through the mutual co-ordination of resource exploitation, investments, technological development and institutional changes. (Laws, 2000) In the foreground, the concept emphasizes qualitative improvements over quantitative growth.

**Figure 1:** Sustainable development – knowledge and a need for multidisciplinary approach



Prepared by the author.

The concept of sustainable development promotes controlled growth and development through the maximum preservation and rational exploitation of resources. This would provide for long-term economic and social development. Development that would, in the long run, cause the disruption of the economic, social and ecological basis is not development based on the principles of sustainability.

Tourism enhances interest in the public utilization of the environment, which will further impact on the private sector, the regional and state government, and especially on the local communities, which are more susceptible to the issue of environmental preservation.

The interdependence of tourism and the environment in achieving sustainable development involves the following: (Coccosis, H., 1996)

- Integrating development policies with the management of natural resources based on projects, plans and programs.
- Developing natural resources management on a regional level, which will provide the framework for management programs for natural resources on a local level.
- Integrating the development of tourism and the policies of natural resources management on a local, regional and state level.
- Increasing local capacities in accordance with the actual possibilities of the environment (especially in areas with strong tourism tendencies).

The environmental policy is generally pointed out as the fundamental issue to consider in elaborating the concept of sustainable tourism development. It goes without saying that the importance of environmental management is incontestable, as it deals with the protection of nature and space, the fundamental resource basis of tourism. However, it should be underlined that it is impossible to competently speak of the sustainable development of tourism, without an analysis of the social, cultural and economic resources.

Just like any other economic activity, tourism has its positive and negative outcomes. Sustainable tourism development should maximize the benefits from tourism, while at the same time minimizing damages or expenses, and directing and limiting tourism development in accordance with the principles of sustainable development in tourism. There are several obstacles to the process of implementing sustainable tourism development in practice: (Muller, H., 1994)

- *Physical and natural limitations.* It is difficult to precisely estimate the tolerance threshold of nature and space, due to continuous changes.
- *The complexity of the relation.* Tourism development cannot be observed through the simplified relation of cause and consequence between two or more factors. Rather, it is a complex relation between various factors having different mutual connections.
- *Time deferred consequences.* There are certain consequences with causes that go back into the past and with effects that have appeared after a lengthy period of time (the ozone layer hole, for example).
- *The assimilation period.* A certain period of time is needed for both nature and humans to adjust to the new situation. The necessity of the assimilation period is often neglected in development projects, resulting in adverse consequences.

## 2. ECOTOURISM: ISSUES AND CONSEQUENCES

Although the concept of sustainable development is been accepted as the leading concept for planning tourism development in general, it has to be pointed out its' special importance for ecotourism destinations.

Increasingly parks, nature reserves and natural settings are becoming popular tourist destinations. The most unique, beautiful natural setting are at the same time the most attractive for tourists and extremely sensitive to their impact.

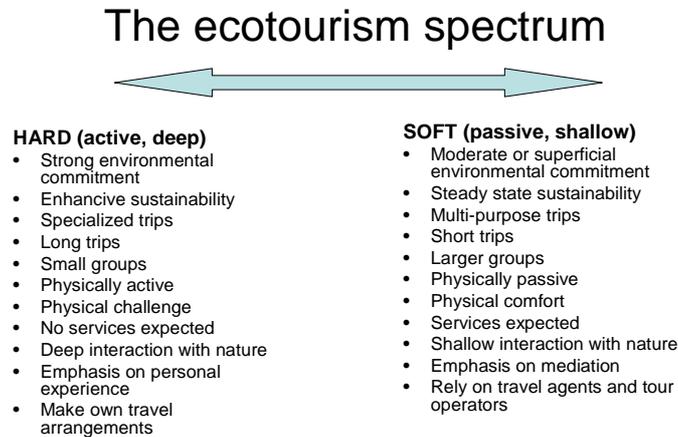
The development of environmentally sensitive tourist resorts responds to the fast growing ecotourism markets and the general public's awareness of environmental preservation and sustainability. Ecotourism is one of the fastest growing type of tourism. Trends indicate that the growth of ecotourism coupled with the larger market segment of nature tourism far surpasses that of tourism in general. While the lack of clear differentiation between ecotourism and other forms of nature tourism makes tracking ecotourism development difficult, it is obvious that travel to natural areas is increasing at a tremendous rate.

In order to measure ecotourism growth special set of indicators could be used, which do provide insight into the current and future magnitude of the sub-industry: growth in ecotourism education, international recognition and regional support, international funding opportunities, growth in tourism eco-certification and eco-labelling programmes. Each of these indicators provides a glimpse beyond the traditional statistical analysis, into the current position of ecotourism and its expected future growth. (Hawkins, D.E., Lamoureux, K., 2001)

Many destinations try to include some kind of eco-activities in their tourism offer in order to increase the attractiveness on the market. Demand for destinations that include natural elements such as national parks and local parks, forests, waterways and others continues to increase. As visitation to natural areas increases, including ecotourism visitation, so does the demand for travel professionals to accommodate these tourists. There have been an increase in tourism professionals, such as travel agents, tour operators, tour guides etc., that focus either on the ecotourism or at least, the nature tourism market. (Hawkins, D.E., Lamoureux, K., 2001)

Eco-tourists could be defined as tourists seeking nature-based learning experiences and behaving in an environmentally and socio-culturally sustainable manner. Nevertheless, eco-tourists are not a homogeneous market, but display a range of motivations, behaviour and other characteristics. Ecotourism spectrum could be seen from hard to soft eco-tourists. (see figure 2).

**Figure 2:** Characteristics of hard and soft ecotourists



Source: Weaver, D. (2001) *Ecotourism*, Wiley, Milton, p. 44.

Hard and soft eco-tourists also differ in the type of experiences and venues that they seek, which has important implications from a product perspective. Protected areas are of the great interest for eco-tourists throughout the world. The World Conservation Union (IUCN, 1994) defines a protected area as an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means. The literature indicates that public protected areas, especially national parks, are the overwhelmingly dominant setting for ecotourism-related activity throughout the world. The World Conservation Union (IUCN) has responded by devising a simplified protected area classification scheme comprising just six basic categories. The basic logic of this IUCN classification system, which is now widely accepted as the international standard for protected areas, is that the lower the designated number of a site, the lower the amount of environmental modification and human intervention that is acceptable. Categories of protected areas according to the IUCN are: Ia Strict Nature Reserve, Ib Wilderness Area, II National Park, III Natural Monument, IV Habitat/Species Management Area, V Protected Landscape/Seascape, VI Managed Resource Protected Area.

### 3. THE POLICY OF GREENING THE TOURISM INDUSTRY

Tourism industry has to improve education for environmental management, which need interdisciplinary approach and close cooperation of social and natural science and professionals. Environmental management systems are the organizational structure, responsibilities, practices, procedures, processes and resources for determining and implementing environmental standards. (Neswome, D. et al., 2002) What has to be pointed out is that the strict legal regulation is necessary to implement the principles of sustainable development and to achieve the environmental

management goals. Nevertheless, tourism has to be economically sustainable, because if tourism is not profitable that it is a moot question to ask whether is environmentally sustainable – tourism that is unprofitable and unviable will simply cease to exist. (Harris, B. et al., 2002)

### 3.1. Voluntary strategies and measures

Tourism industry can apply different strategies in order to connect tourism and environment protection. These may be *voluntary strategies*, such as codes of conduct, or they may be licenses and associated conditions administered by management agencies. (Neswome, D. et al., 2002) A range of means are available for assisting tour operators and those who manage tourism facilities, such as resorts, to conduct their business in ways that minimize its environmental consequences.

*Code of conduct and guidelines* is a set of expectations, behaviors or rules written by industry members, government or non-government organizations. Their aim is to influence the attitudes and behavior of tourists of the tourism industry. A code can be informal and adopted by a group, or more formal and instituted for industry members and/or tourists. The former are often referred to as codes of ethics and tend to be philosophical and value-based whereas the latter are usually known as codes of practice or conduct and are more applicable and specific to actual practice in local situations. Guidelines are also used to direct how tourism activities are undertaken and similarly to codes may be written by industry members, government or non-government organizations.

A code of ethics provides a standard of acceptable performance, often in written form, that assists in establishing and maintaining professionalism. (Jafari, J., 2000) (For example Pacific Asia Tourism Association's code for environmentally responsible tourism.) World Tourism Organization WTO has adopted a Global Code of Ethics for tourism, outlining a sustainable approach to tourism development for destinations, governments, tour operators, developers, travel agents, workers and travelers themselves. Codes or guidelines for specific activities are intended to help tour operators and visitors improve their environmental management and minimize their impacts.

*Accreditation and certification* are other means of assisting tourism industry members to act responsibly. Accreditation involves an agency or organization evaluating and recognizing a program of study or institution as meeting certain predetermined standards or qualifications. (For example The Australian National Ecotourism Accreditation Program.) Certification is testing an individual to determine their mastery of a specific body of knowledge. In early 1999, the World Travel and Tourism Council's Green Globe Program announced an environmental certification program – Green Globe 21. It is the worldwide benchmarking and certification program which facilitates sustainable travel and tourism for consumers, companies and communities. It is based on Agenda 21 and principles for Sustainable Development endorsed by 182 governments at the United Nations Rio de Janeiro Earth Summit in 1992.

Green Globe 21 sets international standards for travel companies and communities for good environmental performance. Objectives include protecting culture, tradition, wildlife and natural resources. The programme covers hotels, airlines, tour operators, travel agents, airports, visitor attractions, cruise ships and car rental companies. Its scope is geographically global and it is supported by a research capacity and set of advisory services. Accreditation and certification can benefit both the tourism industry and the natural environment.

*Best practice* is also encouraging responsible behavior of the tourism industry members. In tourism industry involves minimizing environmental impacts, especially through careful use of resources and their disposal. (for example Best Practice Tourism: A Guide to Energy and Waste Minimization, prepared by Australian government)

Hotel sustainability programmes of best practice have addressed waste reduction, energy conservation and water conservation. The airline industry has been active in greening programmes through addressing noise and emissions reductions and fuel efficiency. Restaurant programmes have focused on solid waste and energy reduction as well as broader community conservation issues.

### **3.2. Regulatory strategies and measures**

*Regulatory strategies* are used together with voluntary strategies to manage tourism areas and protect the environment at the same time. Licenses with associated conditions are issued to tour operators, while leases are issued to tourism business occupying fixed premises for longer periods. Both provide legally based guidance to tourism companies as to how they must conduct their business.

*License* is a certificate of document giving official permission to undertake an activity. Licenses allow the governing agency to monitor access and use of the areas under its control and to ensure that conservation values are maintained. License holders agree to abide by a set of rules and regulations in regard to the areas (mostly environmental sensitive natural areas) in which they operate.

*Leases* are generally issued where operators require exclusive right to land of waters.

## **4. MANAGEMENT OF ECOTOURISM DESTINATIONS – SPECIFIC INDICATORS**

Ecotourism embraces the principles of sustainable tourism, concerning the economic, social and environmental impacts of tourism. As it is pointed out in the above text protected areas are the most popular and important ecotourism destinations. The managers of protected areas must increasingly deal with dual mission – that of protection of the key natural and cultural assets which have led to the designation of the area and that of the accommodating those who visit and take advantage of those assets. (WTO, 2004)

Ecotourism is of particular interest to United Nations Environmental Programme (UNEP). Healthy ecosystems which offer opportunities for outdoor recreation and nature-based tourism are becoming an increasingly important economic resources. Far beyond providing an aesthetic experience only for privileged, ecotourism has great potential – and proven success in many parts of the world – for alleviating poverty and improving human well-being. (UNEP, 2009)

One of the key instruments for successful management of ecotourism destinations are indicators. Indicators are empirical quantitative measures and qualitative reports that serve as managerial tools in the process of tourism development.

The tourism industry needs not only economic indicators but also indicators of environmental and social change. Indicators do not simply measure current conditions but also serve as “early warning” devices to alert managers of imminent problems. (Smith, 1995) Indicators are empirical, qualitative and quantitative measurement/evaluation within the current situation can be detected, and it is the precious information in preparing the tourism development plans and decision considering tourism.

Developing effective indicators for ecotourism destinations, especially protected areas has been particularly challenging. Most protected areas have in place many specific indicators relating to the health of the specific assets, ecosystems and species which are the reason for which they were established, and to their own levels of management. As a most common list of indicators it can be emphasized: (WTO, 2004)

a) Visitor numbers

- Total number of visitors to park and to key sites
- Peak numbers (peak day, month)
- Length of stay
- Use intensity on key sites
- Revenue from paid visitors
- Number of guides/operators permitted to use protected area
- % of all visitors who are in controlled/guided visit

b) Integrity of key protected systems

- Number of sites/ecosystems/assets considered to be damaged or threatened
- Indicators of health related to key plant and animal species
- % of park hardened for visitors of other use
- % of protected area subject to different levels of control (for example IUCN categories)

c) Damage attributable to visitor activity

- % of protected system in degraded condition
- % of trails and routes in damaged condition
- cost of repair to damaged systems (annually)

- % of park area affected by unauthorized activities
  - Number of incidents of poaching identified
- d) Level of visitor control and monitoring
- Number of human/animal contacts reported involving injury or risk of injury
  - Number of crimes against tourists
  - Number of incidents of vandalism
  - % of visitors who do not pay for entry (where fee is charged)
  - Number of wardens of control staff (and number per tourist)
- e) Marketing
- Amount spent on marketing the protected area
- f) Management
- Number of park officials
  - Number of enforcement personnel per visitor
  - Cost of protection
  - Number of public/community meetings held with stakeholders including local periphery communities
  - Ratio of revenues to costs for Park operations

## 5. ECOTOURISM – SPECIFIC KNOWLEDGE AND SKILLS

The need for specific education on order to manage the ecotourism destinations is been identified. In Queensland Ecotourism Plan is written: Ecotourism operators and their employees require specialized training in areas such as ecology, environmental education, environmental and resource management, communication and business skills. Training should be competency based, tailored to the particular requirements of the industry and provided in a culturally appropriate manner. (Lipscombe, N, Thwaites, R., 2001)

A range of knowledge, skills and attitude requirements were identified (see figure 3).

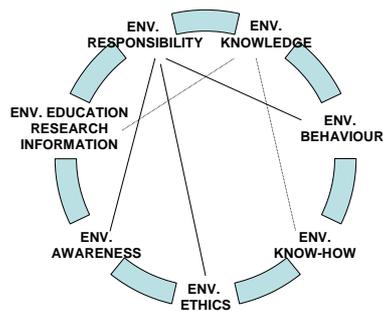
**Figure 3:** Educational requirements for ecotourism management

<b>KNOWLEDGE</b>	Contemporary philosophy and ethics toward ecotourism Basic ecological and geomorphological principles Wildlife and vegetation dynamics and interrelationship Environmental impact occurrence and management relating to ecotourism Ecologically sustainable development and environmental management principles Cultural heritage and cultural heritage management principles Business management theory Ecotourism business practices Communication and interpretation theory relating to natural and cultural heritage
<b>SKILLS</b>	Ability to apply philosophical and ethical practice in ecotourism management Skills in communicating the dynamics, interrelationship and management of natural and cultural heritage Skills in business management and ecotourism business practices Skills in application of leadership theory Skills in recognizing, evaluating and resolving tourism-related environmental, social and cultural impacts Ability to implement ecologically sustainable development principles pertaining to ecotourism
<b>ATTITUDES</b>	An appreciation of ecologically sustainable development principles An appreciation of ethical business practice An awareness of the importance of environment and heritage management to the ecotourism industry An appreciation of ethical ecotourism operations The encouragement of an ethical profile of ecotourism to the public through environmentally responsible ecotourism operations

Source: Lipscombe., N., Thwaites, R. (2001) Education and Training; in Weaver, D. (ed.): The Encyclopedia of Ecotourism, Cabi Publishing, p. 630.

Environmental responsibility and environmental knowledge are two main foundation elements that help to explain how an environmental campaign works. In the model presented at figure 4 environmental responsibility is connected to environmental awareness, ethics and behavior. Environmental responsibility requires both an awareness of environmental problems and behavior that complies with environmental ethics. Thus, environmental behavior is only possible if environmental awareness and ethics exist. Second foundation element in the model is environmental knowledge. This model consists of two parts: environmental education, research and available information on the one hand and environmental know-how on the other. The latter refers to knowledge on appropriate criteria and the means of technical, financial, managerial and organizational implementation of environmental action.

**Figure 4:** Know-how as an essential element of the environmental responsibility-knowledge model



Source: Harris, R., Griffin, T., Williams, P. (2002) *Sustainable Tourism – a Global Perspective*, Butterworth-Heinemann, Elsevier Science, Oxford, p. 98.

## CONCLUSION

Natural resources are in many cases the greatest attractiveness of the tourist destinations. Great interest of the contemporary tourists for areas of natural beauty and/or uniqueness implicate the obligation for tourism managers to use all available methods and instrument in process of minimizing negative impacts that tourism has on the environment. In the process of tourism development in ecotourism destination the great task have the local authorities and tourist association, because it is expected that initiative for actions come from them. They have to work on networking in order to implement the sustainable strategy and to protect the resources. Knowledge is a basic element in order to continuously improve the competitiveness of the ecotourism destination. Ecotourism destination managers must have knowledge form human and natural sciences, specific skills and attitudes.

## REFERENCES

- Avelini Holjevac, I., Smolcic Jurdana, D. (2006) *Ecotourism – Preservation of Nature and Environmental Protection*, 2<sup>nd</sup> Scientific Symposium “*Natural History Researchers of the Rijeka Region*”, Rijeka: Natural History Museum Rijeka.
- Aronsson, L. (2000) *The Development of Sustainable Tourism*, London, New York: Continuum.
- Coccosis, H. (1996) *Tourism and sustainability: Perspectives and Implications*, in Priestley, G.K., Edwards, Coccossis, J.A (ed.): *Sustainable Tourism? European Experiences*, Oxon: CAB International, pp. 1-21.
- Harris, B., Griffin, T., Williams, P. (2002) *Sustainable Tourism: A Global Perspective*, Oxford: Butterworth-Heinemann.

- Hawkins, D.E., Lamoureux, K. (2001) Global Growth and Magnitude of Ecotourism, In: Weaver, D. (ed.) (2001) *The Encyclopedia of Ecotourism*, Oxon: CABI Publishing, 63-83.
- Inskip, E. (1994) *National and Regional Tourism Planning: Methodologies and Case Studies*, WTO, London, New York: Routledge.
- IUCN (1994) *United Nations List of National Parks and Protected Areas*, Gland, Switzerland: World Conservation Union.
- Jafari, J. (ed.) (2000) *Encyclopedia of Tourism*, London: Routledge.
- Lipscombe., N., Thwaites, R.: Education and Training; in Weaver, D. (ed.). (2001) *The Encyclopedia of Ecotourism*, Cabi Publishing, pp. 627-638.
- Mason, P. (2003) *Tourism Impact, Planning and Management*, Oxford: Butterworth-Heinemann.
- Mihalic, T. (2000) Environmental Management of a Tourist Destination: A Factor of Tourism Competitiveness, *Tourism Management*, 21, 65-78.
- Miller, G. (2001) The Development of Indicators for Sustainable Tourism – Results of a Delphi Survey of Tourism Researchers, *Tourism Management*, 22, 351-362.
- Muller, H. (1994) The Thorny Path to Sustainable Tourism Development, in *Proceedings of the Conference Prema održivom razvitku turizma u Hrvatskoj*, Zagreb: Institut za turizam, pp. 9-16.
- Neswome, D., Moor, A.S., Dowling, R.K. (2002) *Natural Area Tourism*, Clevedon: Channel View Publications.
- Ritchie, J.R.B., Crouch, G.I. (2000). The Competitive Destination: A Sustainability Perspective, *Tourism Management*, No. 21, 1-7.
- Ryan, C. (2002). Equity, Management, Power Sharing and Sustaianbility – Issues of the ‘New Tourism’, *Tourism Management*, Vol. 23, 17-26.
- Smith, S.L.J. (1995): *Tourism Analysis: A Handbook*, 2<sup>nd</sup> edition, Essex: Addison Wesley Longman.
- Smolcic Jurdana, D. (2004) Tourism development under new conditions – towards sustainable tourism development, *Conference proceeding ICES 2003 From Transition to Development: globalization and political economy of development in transition economies*, Sarajevo BIH: University of Sarajevo, 459-472.
- Smolcic Jurdana, D., Markovic, S. (2006) Tourism and Quality of Environment: towards the Sustainable Development, International conference “*STIQE 2006 – Linking System Thinking, Innovation, Quality, Entrepreneurship and Environment*”, Maribor: EPFIP & SDSR, 133-140.
- UNEP (2009) *Ecosystem Management Programme – A new approach to Sustainability*, Kenya: UNEP.
- WCED (1987) *Our Common Future*, Oxford: Oxford University Press.
- Weaver, D. (2001) *Ecotourism*, Milton: John Wiley & Sons Australia.
- Weaver, D. (ed.) (2001) *The Encyclopedia of Ecotourism*, Oxon: CABI Publishing.
- WTO (2004) *Indicators of Sustainable Development for Tourism Destinations: A Guidebook*, Madrid: WTO.